additional cardiovascular-risk-factors (ASCOT-LLA patients). ASCOT-BPLA study compared 2 different antihypertensive strategies (ATE+/–Bendroflumethiazide+/–Doxazosin) and AML (+/–Perindopril+/–Doxazosin) to reduce cardiovascular events in 19,257 hypertensive patients. AML demonstrated less all cause mortality than ATE ($p = 0.025$). A sub-study (ASCOT-LLA) comparing ATV to Placebo (PCB) in patients with ≤250 mg/dL was carried out. The ASCOT-LLA was early interrupted because of a significant reduction in the primary endpoint in favour of Atorvastatin. A factorial analysis of ASCOT-LLA (ATV + AML; PBO + AML; ATV + ATE; PBO-ATE) demonstrated a 53% relative risk reduction of ATV + AML versus PBO + AML ($p < 0.0001$); and of 39% for ATV + AML versus ATV + ATE ($p = 0.016$). **METHODS:** Two hypothetical cohorts of ASCOT-LLA like patients were simulated for a 25 years time horizon under the perspective of the National Health System, by a Markov model. Spanish costs (€2005) of ATV, AML, ATE, Peridonpril and Bendroflumethiazide were taken into account. Effects were based on results of the ASCOT 2x2 analysis: ATV + AML versus ATV + ATE. Results are expressed as incremental cost-effectiveness ratio (ICER) per QALY. Costs and effectiveness outcomes were discounted at a rate of 3% and 5% per year, respectively. **RESULTS:** The basecase analysis demonstrates that ATV + AML strategy is a more effective alternative with an acceptable increase in costs: ICER of ATV + AML was 17.334€ per QALY. **CONCLUSION:** Atorvastatin + Amlodipine is a cost-effective strategy when compared with Atorvastatin + Atenolol for the treatment of hypertensive patients with no prior history of cardiovascular disease, normal to mildly elevated cholesterol levels and with at least 3 additional cardiovascular-risk-factors, being under the threshold of 30.000€ per QALY usually accepted in our environment.

PCV35

USE OF DRUG-ELUTING STENTS IN THE THERAPY AND PREVENTION OF RESTENOSIS: AN ECONOMIC EVALUATION FOR THE SICILY REGIONAL GOVERNMENT IN ITALY

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OBJECTIVES: To evaluate clinical and economic benefit of Drug Eluting Stents (DES) in comparison with Bare-Metal Stents (BMS) and surgical treatment with coronary artery bypass graft (CABG) for Sicily Regional Government. **METHODS:** Cost-effectiveness analysis was carried out by two decision models: patients treated with DES vs. BMS. Cost was carried out from the point of view of the SSR (Servizio Sanitario Regionale, Regional Health Service). **RESULTS:** The use of DES generated unitary differential savings of €9,003, after 9 months of follow-up, and total differential savings of €4,114,371. The use of DES on patients destined to BMS gave average unitary differential savings of €1,075, after 9 months of follow-up, and average total differential savings of €927,875. The use of DES instead of BMS and CABG allowed SSR to make average differential savings of €3,735 per successful case. A total of €2,476 represent the refund threshold value of DES, setting to zero the SSR average differential savings for patients treated with DES who would otherwise have been treated with BMS. **CONCLUSION:** Results of the proposed models, tested with sensitivity analysis, demonstrate the use of DES to be justified; moreover, these results could positively influence the attitude of the SSR towards these new therapeutic strategies, which are an improvement on standard therapies, both from a clinical and a financial standpoint.

PCV36

COST-EFFECTIVENESS OF THE MANAGEMENT OF FAMILIAL HYPERCHOLESTEROLAEMIA WITH A PREVENTIVE TREATMENT ATORVASTATIN-BASED

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OBJECTIVES: Familial hypercholesterolemia (FH) is characterized by elevated LDL-Cholesterol and premature cardiovascular disease. To evaluate the efficiency of preventive strategies, a cost-effectiveness model was developed: treatment in real clinical practice, different atorvastatin dosage in monotherapy 40 mg (A40) or 80 mg (A80) and atorvastatin combined with Ezetimebe 10 mg (A40 + E10, A80 + E10). **METHODS:** A Markov model under National Health System perspective and with a timeframe of all life expectancy was developed. Spanish life tables (2002) were modified with standard mortality rate for FH population (1.59; IC-95% = 1.07–2.26) to convert the reduction of mortality into life years gained (LYG). Treatment effectiveness was transformed in CV mortality reduction by using risk reduction based on Framingham risk score. Statins, clinical management and pharmacological costs were taken into account (Spanish costs €2005). Costs and effectiveness were discounted at a rate of 6% and 3% per year, respectively. **RESULTS:** 1) Basecase scenario (BS), based on Spanish FH database would represent 1.97 LYG per patient in comparison to no treatment, costs due statins were €5.321, other management costs (MC) €23.389 and total costs (TOC) €28710; 2) A40: 2.59 LYG, MC was reduced 4.5% in comparison to BS; TOC were €30.569; 3)A80: 2.75 LYG, reduction of MC:6.4%, and TOC: €30.133; 4)A40 + E10: 3.38 LYG, reduction of MC:14.3% and TOC: €36.104; and 5)A80 + E10: 3.62 LYG, reduction of CM: 17.6% and TOC: €35.317. Management strategies from more to less efficient incremental cost-effectiveness rate (ICER) per LYG in comparison to BS were: a) A80: €1.821; b) A40: €3.012; and c) A80 + E10: €4.021; and d) A40 + E10: €5.250. **CONCLUSION:** Management of FH with atorvastatin-based treatment is an efficient strategy: Atorvastatin 80 mg in monotherapy is the most efficient. If LDL therapeutic goals with Atorvastatin 80 mg are not achieved, the concomitant use of Ezetimibe can give an additional effect with an acceptable incremental cost.

PCV37

COST-EFFECTIVENESS OF ATORVASTATIN, ROSUVASTATIN, AND SIMVASTATIN IN REDUCING LDL-CHOLESTEROL TO MEET THE EUROPEAN TARGET LEVEL—BAYESIAN META-ANALYSIS AND SIMULATION

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OBJECTIVES: To evaluate the cost-effectiveness of atorvastatin, rosuvastatin, and simvastatin in reducing LDL-cholesterol (LDL-C) and in treatment of patients with high risk of fatal cardiovascular disease to meet the European LDL-C target level of 2.5 mmol/l. **METHODS:** The efficacy of statins in terms of mean percent reduction in LDL-C was determined by literature review and Bayesian random effects meta-analysis. A simulation model was created to evaluate the proportion of patients treated to the LDL-C target (PTT) level of 2.5 mmol/l. The uncertainty related to the independent variables was modeled with Bayesian MCMC-simulation with the use of WinBUGS software. The measures of cost-effectiveness were calculated by annual medicine costs per PTT and by incremental cost-effectiveness ratios (ICERs). The annual medicine costs were

applied from Finnish medicine tariff. **RESULTS:** All the patients with baseline LDL-C level of 4,0 mmol/l (SD = 0,25 mmol/l) reached PTT when using rosuvastatin 10 mg, 20 mg or 40 mg. Corresponding numbers for simvastatin 20 mg, 40 mg and 80 mg were 4%, 57%, and 99%, respectively. The incremental annual cost of rosuvastatin 10 mg compared to generic simvastatin 40 mg was 710€ per additional PTT. When patient's baseline LDL-C level exceeded 4.2 mmol/l rosuvastatin produced the lowest annual medicine costs per PTT. With lower levels of LDL-C simvastatin was the most cost-effective to use. Atorvastatin was less effective and more costly than rosuvastatin with all baseline LDL-levels and was therefore dominated. **CONCLUSION:** The cost-effectiveness of statins depends on patient's cardiovascular risk profile and baseline cholesterol level. In Finland rosuvastatin is cost-effective in reaching European LDL-C target of 2.5 mmol/l when patient's LDL-C level exceeds 4.2 mmol/l.

PCV38

COST-EFFECTIVENESS OF ANGIOTENSIN RECEPTOR BLOCKERS IN PATIENTS WITH HYPERTENSION: A COMPARATIVE ANALYSIS USING CLINICAL TRIAL AND OBSERVATIONAL DATA

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OBJECTIVES: Hypertension is an independent risk factor for cardiovascular disease, which results in an enormous burden to society, both in terms of health and costing. Therefore, health gains and related cost-savings could be achieved by optimizing antihypertensive treatment. The aim of this study was to estimate the cost-effectiveness of treating patients with hypertension in The Netherlands with angiotensin II receptor blockers (ARBs). **METHODS:** Our analysis comprised: 1) estimation of the cost-effectiveness based on a published, prospective, randomized, double-blind clinical trial comparing blood pressure lowering of olmesartan, losartan, valsartan and irbesartan; blood pressures at 8 weeks were inserted in the Framingham risk functions to estimate cardiovascular complications, using an international health economic model, and 2) a cost-minimization analysis (assuming comparable effectiveness) using daily practice prescription data from IADB.nl (50 pharmacies), a database covering a population of 500,000. **RESULTS:** After 8 weeks, the trial-based analysis showed that with olmesartan versus losartan, valsartan, and irbesartan a statistically significant larger decrease in blood pressure was achieved (11.5 versus 8.2, 7.9, and 9.9 mmHg [$p < 0.05$], respectively). Furthermore, olmesartan resulted in most complications averted. Cost-effectiveness for olmesartan, losartan, valsartan, and irbesartan was estimated at €39,100, €77,100, €70,700, and €50,900 per cardiovascular complication averted, respectively. Pharmacy data showed that trial-dosing at 1 'Defined Daily Dose' (DDD) was not found in practice. On average, losartan, valsartan and irbesartan were consequently dosed above 1 DDD varying from 1.19 to 1.38 'Prescribed Daily Dose' (PDD), whereas olmesartan was dosed at 0.88 PDD and thus presenting (relatively) lower costs. **CONCLUSION:** Olmesartan was estimated to be the most cost-effective option of the four ARBs. However, due to differences found in within-trial versus daily practice dosing and absence of effectiveness data from daily practice, confirmation is needed from further prospective studies comparing ARBs based on comparable blood pressure control including hard endpoints.

PCV39

COST UTILITY ANALYSIS OF CLOPIDOGREL IN ADDITION TO STANDARD CARE FOR ST-ELEVATED MYOCARDIAL INFARCTION: THE UK PERSPECTIVE

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OBJECTIVES: Despite considerable improvements in the treatment of ST-elevated myocardial infarction (STEMI), patients remain at long-term risk of additional cardiovascular (CV) events (such as MI, stroke or vascular death). Over a four week treatment period, the CLARITY-TIMI 28 and COMMIT/CCS-2 trials demonstrated that clopidogrel (with and without loading dose, respectively), administered in addition to standard therapy, reduces the rate of mortality, infarct-related artery patency or MI (RR 0.64 95% CI 0.53–0.76) and death, reinfarction or stroke (0.91; 0.86–0.97), respectively. The aim of this study was to assess the incremental cost per QALY (ICQ) of clopidogrel for either one month or one year, in addition to standard care in STEMI patients, from a UK perspective. **METHODS:** A cohort Markov model described the experience of new CV events (MI and stroke) prior to death in patients diagnosed with STEMI. UK relevant STEMI baseline event rates were synthesised using data from the literature and observational databases. Event rates in clopidogrel patients were estimated by applying the aggregate RRs from the respective trials to the baseline event rates. Health state costs were derived from relevant UK-based costing studies and updated to 2006 values, utility values were derived from the broader literature. Costs and QALYs were discounted at 3.5%, a full range of deterministic and probabilistic sensitivity analyses were undertaken. **RESULTS:** For the 1-month and 1-year treatment options both trials have mean ICQs below ≤2,500 and ≤4,000, respectively. In univariate sensitivity analyses the ICQ never rose above ≤10,000. The probabilistic sensitivity analysis showed that in all four analyses, clopidogrel was over 95% likely to be cost-effective at a QALY value of ≤20,000. **CONCLUSION:** The estimated ICQs for both treatment options and for both trials suggest that clopidogrel plus standard therapy is a cost-effective alternative to standard therapy alone based on current willingness to pay thresholds.

PCV40

STUDY OF THE COST OF OUTPATIENT HYPERTENSION THERAPY IN BULGARIA

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OBJECTIVES: Ambulatory hypertension treatment is effective in reducing mortality and morbidity due to cardiovascular diseases. There are published evidences of under treatment of hypertension instead of the existing choice among lots of antihypertensive medicines. This study aims to explore the antihypertensive medicines prescribing and cost of hypertension therapy in Bulgaria from the outpatient practice perspective. **METHODS:** A representative sample of 2105 reimbursable prescriptions was collected on a retrospective basis within one year. The prescriptions were systematized according to the complexity of the therapy (mono-, di-, three), INN, frequency of the prescribed brand names of medicines, reimbursement drug prices, as well as, patient co-payment. To calculate the cost of the outpatient therapy was build the decision tree model. It matches the differences in the frequency of particular brand names prescribing and their prices, as well as the cost dependence on complexity of the therapy. **RESULTS:** The ACE inhibitors are the first treatment choice (41%, CI 95%) in the prescriptions, following by beta blockers 19.43% and calcium channel blockers with 15.2% share. The prescriptions with one medicine are 61%, di therapy